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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/693,052

Applicant(s)

CHAN, YI-CHUNG

Examiner

LaTanya Bibbins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-10 and 21-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-10 and 21-38 is/are rejected.
- 7) ☒ Claim(s) 19-36 (renumbered 21-38) is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 8, 2008 has been entered.
2. In the remarks filed on February 8, 2008, Applicant amended claim 7, cancelled claims 1-6 and 11-18, and submitted arguments for allowability of pending claims 7-10.
3. In a supplemental response filed on February 15, 2008, Applicant added new claims 19-36 and presented arguments for allowability of claims 7-10.

Response to Arguments

4. Applicant's arguments with respect to claims 7-10 have been considered but are moot in view of the new ground of rejection.
5. It is noted that applicant does not present any statements regarding the patentability of newly added claims 19-36.

Claim Objections

6. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When

claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 19-36 have been renumbered 21-38 and the claim dependency has been preserved. Claims 19-36 will herein be referenced as claims 21-38 in the remainder of this office action.

Drawings

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, determining a distance error and comparing the computed distance with a distance threshold if the distance error is less than a failure threshold, as recited in claim 29, must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. ***Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

Claim 35 recites the limitations "the compared dimension," "the longest transition region," and "the transition region threshold." There is insufficient antecedent basis for these limitations in the claim.

Since claim 34 contains the limitations "the compared dimension," "the longest transition region," and "the transition region threshold," the Examiner believes that it is applicants intention to have claim 35 depend from claim 34 such that there is proper antecedent basis for the claimed limitations. Therefore, in the interest of compact prosecution, Examiner will interpret claim 35 as being dependent from claim 34 however, appropriate correction is required by applicant.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. ***Claims 7-9, 21-23, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishima (US Patent Number 6,909,678 B2) in view of Yoshida et al. (US Patent Number 5,764,610).***

Regarding claim 7, Morishima discloses accessing synchronous data from a predetermined range of the optical storage medium (see the read EFM signal in Figures 1 and 2 and the discussion in column 1 lines 34-66) and configuring a clock frequency of a PLL at a rate based on the accessed synchronous data to enable further data to be read from the optical storage medium (see the read EFM signal, the ATIP synchronization signal, and the PLL circuits in Figures 1 and 2 and the discussion in column 1 lines 34-66 regarding the generation of the read and write clocks based on the read EFM and ATIP synchronization signals).

While Morishima does not disclose, Yoshida clearly discloses a method for discriminating an optical storage medium (column 1 lines 9-14), comprising: comparing the clock frequency with a frequency threshold to discriminate a type of the optical storage medium so that the further data can be read (col. 4, lines 9-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to discriminate an optical storage

medium as described by Yoshida into the teachings of Morishima. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to "provide a disc type identifying system which can efficiently distinguish between at least four types of optical discs" (Yoshida column 2 lines 63-67).

Regarding claim 8, Yoshida further discloses wherein the optical storage medium is discriminated as a DVD when the clock frequency is larger than the frequency threshold (col. 4, Lines 9-16 and col. 6, Lines 25-36).

Regarding claim 9, Yoshida further discloses wherein the optical storage medium is discriminated as a CD when the clock frequency is smaller than the frequency threshold (col. 4, Lines 9-16 and col. 6, Lines 25-36).

Claims 21-23 and 25-27 are drawn to the apparatus corresponding to the method of using same as claimed in claims 7-9. Therefore apparatus claims 21-23 and 25-27 correspond to method claims 7-9, and are rejected for the same reasons of obviousness as used above.

12. Claims 10, 24, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishima (US Patent Number 6,909,678 B2) in view of Yoshida et al. (US Patent Number 5,764,610) as applied to claims 7, 21, and 25 above, and further in view of Hira (US Patent Number 5,381,392).

Regarding claim 10, Morishima in combination with Yoshida disclose the discrimination method according to claim 7, but do not explicitly disclose while Hira

suggests the optical storage medium is discriminated as a blank disk when the clock frequency is substantially zero (Col. 3, Lines 53-63).

Therefore, it would have been obvious to one ordinarily skilled in the art at the time of the invention to supplement the teachings of Morishima and Yoshida and have an optical storage medium be discriminated as a blank disk when the clock frequency is substantially zero, as suggested by Hira, in order to determine if a disk is blank and thus recordable.

Claims 24 and 28 are drawn to the apparatus corresponding to the method of using same as claimed in claim 7. Therefore apparatus claims 24 and 28 correspond to method claim 7, and are rejected for the same reasons of obviousness as used above.

13. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andoh (US Patent Number 6,249,499 B1) in view of Yamada et al. (US Patent Number 5,831,952).

Regarding claim 29, Andoh discloses a method for discriminating a type of an optical storage medium (see the abstract and column 2 lines 32-55).

Yamada discloses computing a distance between a reflection layer of the optical storage medium and a surface layer of the optical storage medium (col. 2, line 62 - col. 3, line 5); determining a distance error of the computed distance between the reflection layer of the optical storage medium and the surface layer of the optical storage medium (col. 2, line 62 - col. 3, line 5); and comparing the computed distance with a distance

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threshold to discriminate a type of the optical storage medium (col. 2, line 62 - col. 3, line 5).

Ando additionally discloses if the distance error is less than a failure threshold, and using an alternate method to discriminate the type of the optical storage medium (column 2 lines 32-55 particularly the discussion regarding the use of alternate methods "in the case where the first discrimination means can not discriminate the type of optical disc").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Andoh and Yamada. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to play back or record and play back different types of optical discs having different reflectances and to discriminate the type of optical disc easily and reliably (see the abstract of Andoh).

Regarding claim 30, Yamada further discloses wherein the optical storage medium is discriminated as a DVD if the computed distance is smaller than the distance threshold (col.3, lines 4-5; DVD has a thin base substrate).

Regarding claim 31, Yamada further discloses wherein the optical storage medium is discriminated as a CD if the computed distance is larger than the distance threshold (col. 3, lines 4-5; CD has a thick base substrate).

14. Claims 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andoh (US Patent Number 6,249,499 B1) in view of Yamada et al. (US Patent

Number 5,831,952) as applied to claim 29 above, and further in view of Kumagai (US Patent Number 6,005,832).

Regarding claim 32, the combination of Andoh and Yamada disclose the method of claim 29, and the use of an alternate method to discriminate a type of optical storage medium as noted above.

Kumagai, however, discloses reading multiple data transition points from a specified range of the optical storage medium; and determining a dimension of multiple transition regions in the specified range of the optical storage medium, the transition regions being an interval between neighboring data transition points (discrimination signal and measured times t1 and t2, Col. 14, Lines 24-29 and 39-47, see Fig. 17C, elements 11 and 13, and Fig. 17E, elements 12 and 14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the teachings of Andoh and Yamada with that of Kumagai. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to effectively discriminate between types of optical disks.

Regarding claim 33, Kumagai further discloses wherein the data transition points are edges of lands on the optical storage medium (column 7 lines 46-58).

Regarding claim 34, Andoh and Yamada do not disclose, but Kumagai discloses obtaining a longest transition region in the multiple transition regions (comparing the measured times and threshold value, col. 14, lines 48-53); and comparing a dimension of the longest transition region to a transition region threshold to

discriminate the type of the optical storage medium (col. 14, lines 53-55; col. 15, lines 60-65; col. 16 lines 6-10).

Regarding claim 35, Kumagai further discloses wherein the compared dimension is a time consumption of the longest transition region and the transition region threshold is a time threshold (discrimination signal and measured times t1 and t22, Col. 14, Lines 24-29 and 39-47; Col. 15, Lines 60-65; Col. 16, Lines 6-10 and comparing the measured times and threshold value, Col. 14, Lines 48-53).

Regarding claim 36, Kumagai further discloses wherein the optical storage medium is discriminated as a DVD when the time consumption is smaller than the time threshold (col. 15, lines 60-65; col. 16, lines 6-10).

15. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andoh (US Patent Number 6,249,499 B1) in view of Yamada et al. (US Patent Number 5,831,952) as applied to claim 29 above, further in view of Morishima (US Patent Number 6,909,678 B2), and further in view of Yoshida et al. (US Patent Number 5,764,610).

Regarding claim 37, the combination of Andoh and Yamada disclose the method of claim 29 Morishima, however, discloses accessing synchronous data from a specified range of the optical storage medium (see the read EFM signal in Figures 1 and 2 and the discussion in column 1 lines 34-66) and configuring a clock frequency of a PLL at a rate based on the accessed synchronous data to enable further data to be read from the optical storage medium (see the read EFM signal, the ATIP

synchronization signal, and the PLL circuits in Figures 1 and 2 and the discussion in column 1 lines 34-66 regarding the generation of the read and write clocks based on the read EFM and ATIP synchronization signals).

While Morishima does not disclose, Yoshida clearly discloses comparing the clock frequency of the PLL with a frequency threshold to discriminate the type of the optical storage medium so that the further data can be read (col. 4, lines 9-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the method of discriminating a type of an optical storage medium as taught by the combination of Morishima and Yoshida into that of Andoh and Yamada. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to "provide a disc type identifying system which can efficiently distinguish between at least four types of optical discs" (Yoshida column 2 lines 63-67).

16. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andoh (US Patent Number 6,249,499 B1) in view of Yamada et al. (US Patent Number 5,831,952) in view of Morishima (US Patent Number 6,909,678 B2) in view of Yoshida et al. (US Patent Number 5,764,610) as applied to claim 37 above, and further in view of Hira (US Patent Number 5,381,392).

Regarding claim 38, the combination of Andoh, Yamada, Morishima, and Yoshida disclose the method of claim 37. Hira, however, suggests wherein the optical

storage medium is discriminated as blank if the clock frequency is substantially zero (col. 3, Lines 53-63).

Therefore, it would have been obvious to one ordinarily skilled in the art at the time of the invention to supplement the teachings of Andoh, Yamada, Morishima, and Yoshida and have an optical storage medium be discriminated as a blank disk when the clock frequency is substantially zero, as suggested by Hira, in order to determine if a disk is blank and thus recordable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571)270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LaTanya Bibbins/
Examiner, Art Unit 2627

/Wayne R. Young/
Supervisory Patent Examiner, Art Unit 2627